

WHAT IS CLAIMED IS:

1. An information converting method of converting audio information, which comprises a plurality of partial-audio information based on a predetermined record standard in each of which output control information to control a state of the audio information at a time of outputting the audio information to an external portion is included, into transmission information to be transmitted through a data bus based on a predetermined transmission standard, said method comprising:

an extracting process of extracting the output control information from each of the partial-audio information;

a dividing process of dividing the audio information for each information amount, which is set in advance so as to transmit the transmission information through the data bus, to thereby generate divided-audio information;

a generating process of adding the extracted output control information onto the generated divided-audio information to thereby generate an information unit for transmitting the audio information through said data bus; and

an outputting process of generating the transmission information by using a plurality of the generated information units and outputting the generated transmission information onto said data bus.

2. An information converting method according to Claim 1,

wherein

the output control information comprises:

first control information to be transmitted through said data bus, in response to the number of samplings preset in the audio information; and

second control information to be transmitted through said data bus only if it is required, and

if a transmission of the second control information is not required, said generating process generates the information unit comprising the divided-audio information, the first control information and predetermined other information in place of the second control information.

3. An information converting method according to Claim 2, wherein

the first control information comprises mix control information to perform a channel mix process of the audio information at the time of outputting, and

the second control information comprises frequency identification information indicative of a sampling frequency of the audio information.

4. An information converting method according to Claim 2, wherein

said generating process adds first identification information indicative of a content of the first control information at a position to

be transmitted prior to the first control information within each of the information unit, and

said generating process adds second identification information indicative of a content of the second control information at a position to be transmitted prior to the second control information within each of the information unit.

5. An information converting method according to Claim 1, wherein

10 the predetermined transmission standard is an IEEE (Institute of Electrical and Electronic Engineers) 1394 standard,

said data bus comprises a serial data bus through which the transmission information is transmitted in accordance with the IEEE 1394 standard, and

15 said information unit comprises one portion of an isochronous packet based on the IEEE 1394 standard.

6. An information converting method according to Claim 1, wherein

20 the predetermined record standard is a DVD audio standard, the partial-audio information comprises an audio pack based on the DVD audio standard, and

the output control information comprises information in a private header based on the DVD audio standard.

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✓ 7. An information converting apparatus for converting audio

information, which comprises a plurality of partial-audio information based on a predetermined record standard in each of which output control information to control a state of the audio information at a time of outputting the audio information to an external portion is included, into transmission information to be transmitted through a data bus based on a predetermined transmission standard, said apparatus comprising:

an extracting device for extracting the output control information from each of the partial-audio information;

a dividing device for dividing the audio information for each information amount, which is set in advance so as to transmit the transmission information through the data bus, to thereby generate divided-audio information;

a generating device for adding the extracted output control information onto the generated divided-audio information to thereby generate an information unit for transmitting the audio information through said data bus; and

an outputting device for generating the transmission information by using a plurality of the generated information units and outputting the generated transmission information onto said data bus.

8. An information converting apparatus according to Claim 7, wherein

the output control information comprises:

first control information to be transmitted through said data

bus, in response to the number of samplings preset in the audio information; and

second control information to be transmitted through said data bus only if it is required, and

5 if a transmission of the second control information is not required, said generating device generates the information unit comprising the divided-audio information, the first control information and predetermined other information in place of the second control information.

10 9. An information converting apparatus according to Claim 8, wherein

the first control information comprises mix control information to perform a channel mix process of the audio
15 information at the time of outputting, and

the second control information comprises frequency identification information indicative of a sampling frequency of the audio information.

20 10. An information converting apparatus according to Claim 8, wherein

said generating device adds first identification information indicative of a content of the first control information at a position to be transmitted prior to the first control information within each of
25 the information unit, and

said generating device adds second identification information

indicative of a content of the second control information at a position to be transmitted prior to the second control information within each of the information unit.

- 5 11. An information converting apparatus according to Claim 7, wherein

the predetermined transmission standard is an IEEE (Institute of Electrical and Electronic Engineers) 1394 standard,

10 said data bus comprises a serial data bus through which the transmission information is transmitted in accordance with the IEEE 1394 standard, and

said information unit comprises one portion of an isochronous packet based on the IEEE 1394 standard.

- 15 12. An information converting apparatus according to Claim 7, wherein

the predetermined record standard is a DVD audio standard,

the partial-audio information comprises an audio pack based on the DVD audio standard, and

20 the output control information comprises information in a private header based on the DVD audio standard.

~~13.~~ An information reproducing apparatus comprising

25 (i) an information converting apparatus for converting audio information, which comprises a plurality of partial-audio information based on a predetermined record standard in each of which output

control information to control a state of the audio information at a time of outputting the audio information to an external portion is included, into transmission information to be transmitted through a data bus based on a predetermined transmission standard, said
5 information converting apparatus comprising:

an extracting device for extracting the output control information from each of the partial-audio information;

a dividing device for dividing the audio information for each information amount, which is set in advance so as to transmit the transmission information through the data bus, to thereby generate
10 divided-audio information;

a generating device for adding the extracted output control information onto the generated divided-audio information to thereby generate an information unit for transmitting the audio information
15 through said data bus; and

an outputting device for generating the transmission information by using a plurality of the generated information units and outputting the generated transmission information onto said data bus, and

20 (ii) a reproducing device for reproducing the audio information.